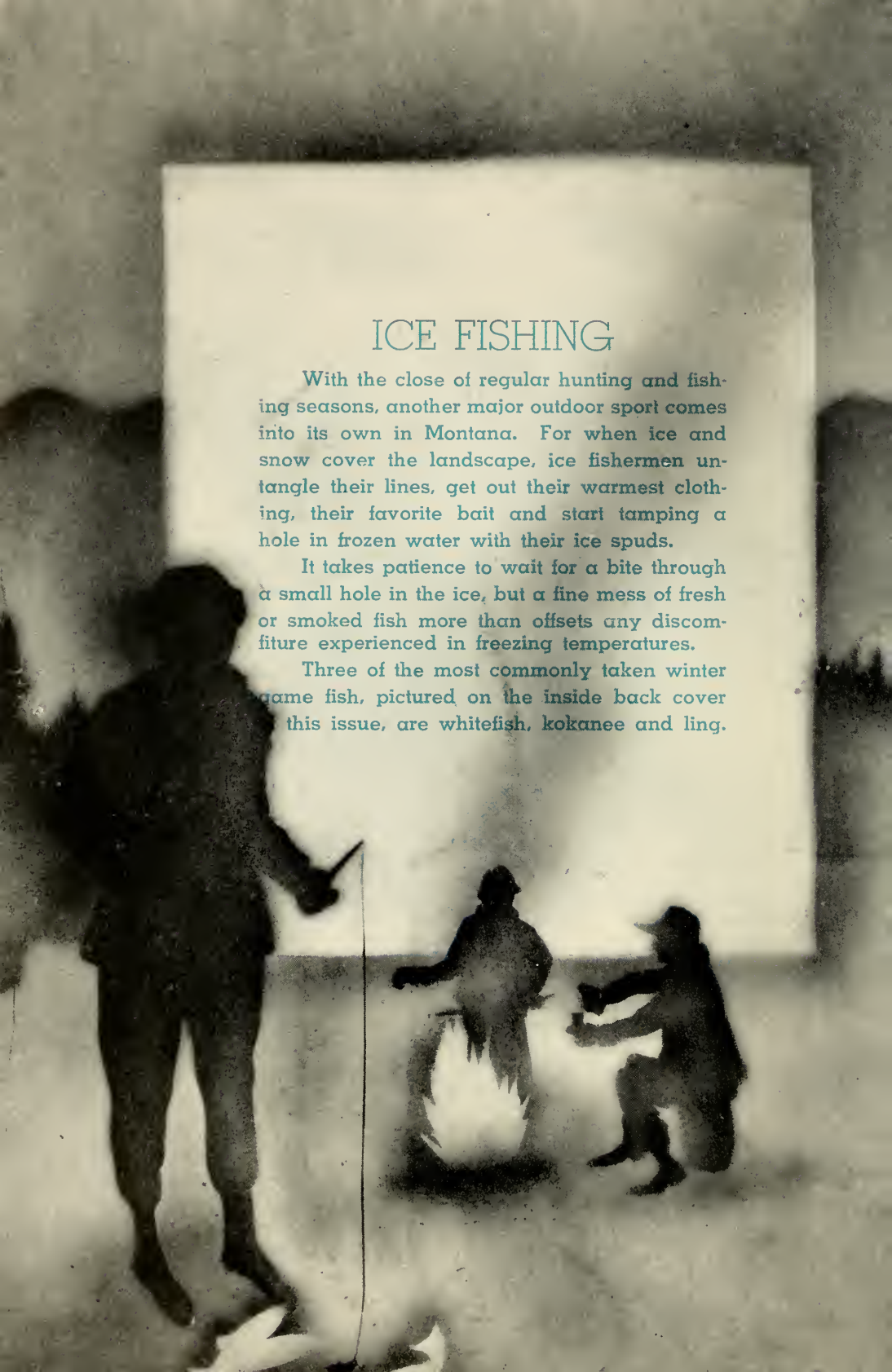
Earl Wiggins

MONTANA *Wildlife*

VOL. III — NO. 1

Official Publication
Montana Fish and Game Department



ICE FISHING

With the close of regular hunting and fishing seasons, another major outdoor sport comes into its own in Montana. For when ice and snow cover the landscape, ice fishermen untangle their lines, get out their warmest clothing, their favorite bait and start tamping a hole in frozen water with their ice spuds.

It takes patience to wait for a bite through a small hole in the ice, but a fine mess of fresh or smoked fish more than offsets any discomfiture experienced in freezing temperatures.

Three of the most commonly taken winter game fish, pictured on the inside back cover of this issue, are whitefish, kokanee and ling.

MONTANA FISH AND GAME DEPARTMENT

Official Publication

State of Montana

J. Hugo Aronson, Governor

MONTANA FISH AND GAME COMMISSION

Edward M. Boyes, Chairman

Walter Banka — Thomas S. Morgan

William T. Sweet — Manson H. Bailey, Jr.

Robert H. Lambeth, Secretary

McKEE PRINTING CO. BUTTE, MONTANA

The Commissioner's Message

The voice of the people, as reflected in their duly elected legislature, is the governing force behind our democracy. This is as true in fish and game matters as it is in any other state agency or activity.

Laws prescribe the duties and responsibilities of the Fish and Game Commission. Some of these are exacting and limiting. Others are broad in power and scope. In fish and game management where conditions change rapidly and often drastically, it is necessary that authority for changes be flexible.

Former Montana legislators have given the Fish and Game Commission fairly broad regulatory powers in setting seasons and bag limits. It is our sincere desire to use this authority wisely and for the common good.

Changes in biological and economic conditions in Montana will necessitate the making of new laws and the scrapping of old ones. But always in the background will be the voice of democracy —the voice of the people.

Edward M. Boyes, Chairman

Montana Wildlife

Volume III | No. 1

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Winter Issue — 1953

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Our Cover

Snowshoe rabbits, also called "varying hares," are so named because of their distinctively large feet and the fact that they completely change color every six months. In summer, the color of the fur blends with the ground and their surroundings. By mid-autumn, the fur begins to molt and is gradually replaced by white hairs until the animal is entirely white by the time the snow arrives. The hairs on the feet spread out and thicken to form their buoyant "snowshoes."

The species is found in high, mountain areas of Montana as they are well-adapted to a climate of deep snows and harsh winters. They do not hibernate during the winter nor do they "hole-up" when pursued by enemies, but rather, depend on their ability to run swiftly over soft snow. These rabbits can clear eight to ten feet at a bound and can make an average of four bounds per second. Their chief defense against enemies is their ability to get up full speed at once and dodge adroitly.

Snowshoes feed primarily on green plants and clover in summer, on willow bark and twigs in winter. As the snow deepens, they are automatically raised to a fresh source of buds and bark and in some areas have been known to compete with deer and even moose for food supplies.

EDITORIAL:

Resource Planning Council Is Forward Step

Creation by the 33rd legislature of an eight-member council from the various state departments of natural resources conservation and development should be of considerable benefit to the future of the state's wildlife and of primary interest to sportsmen. The act providing for this council originated in the Senate of Montana's 1953 legislative session and was signed into law by Governor Aronson this month.

Membership in the council will be made up of the game warden, commissioner of state lands and investments, state forester, secretary of grass commission, state engineer, secretary of the oil conservation board, director of the state bureau of mines and geology and state highway engineer.

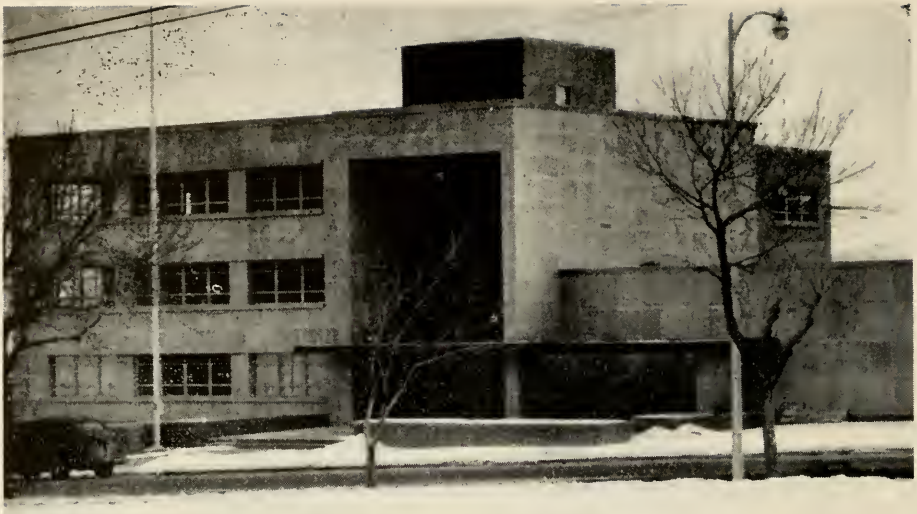
Meetings will be held every three months in Helena to plan and co-ordinate matters concerning natural resources. Special meetings may be called by the governor if a problem calling for immediate action arises.

Formation of this resource planning council is definitely a forward step in working out problems affecting Montana's vast natural wealth. Wildlife, as well as all other resources involved, should receive substantial gains through these efforts.

In the future, it is reasonable to expect that such examples as highway construction which disrupts a trout stream, may be avoided by the suggestion of alternate plans. Pollution resulting from new industry can possibly be averted with more intensive planning, although good laws on this matter are still needed.

Problems of multiple uses of state lands can be resolved at council roundtable discussions so that livestock, wildlife and other users will be fairly considered. Effect of water impoundments can be analyzed and action, based on information which considers all resources affected, should result.

If objectives of this council are properly carried out, no single resource will suffer a great loss or gain at the expense of another. If this council functions actively and vigorously, Montana's valuable natural resources will receive the consideration and management needed to assure wise use for the benefit of the state and the nation.



Above, the new building east of the Capitol which now houses the treasures of the Historical Society of Montana. In the low, wall-like structure at right is the museum where miniature and life-size models will portray the history of the state from a primitive paradise to today's modern practices of sane conservation.

Conservation Finds A New Ally

An Introduction to the New and Rejuvenated Historical Society of Montana

by

Michael Kennedy

When white man first arrived on the Great Plains, game was so plentiful that the region was a veritable hunter's paradise and a naturalist's haven.

This was so because for centuries the balance of nature had been unimpaired. Wildlife and the only human habitants—Indians—were attuned harmoniously.

The Indian was a natural conservationist who did nothing to disturb forest, stream or prairie cover and who killed only the normal increase of game.

There was nothing wanton or destructive in his practice, granting the will to survival which is inherent in all life and which actually retained the natural balance, rather than disturbed it.

As late as 1854 along the Missouri River, which had been a route of ever-increasing travel for fifty years, early settlers described the amount of game as immense.

Acres of wild geese rose from sandbars to form soldier-like lines in the sky. Storks, cranes, geese, swans, ducks and all other kinds of waterfowl abounded in unbelievable quantities. The prairies swarmed with prairie chicken, sage hen and quail. In the brush and timber country, grouse and many other upland species flourished.

Most wildfowl noticeably decreased with the increasing white population, but the greatest immediate sufferer was the passenger pigeon, eventually slaughtered to extinction. This bird inhabited the region between the Mississippi and the Missouri Rivers.

Records show an abundance of antelope which later almost faced extinction also and of great herds of elk, originally a prairie and

foothills animal, which were forced to seek refuge in high mountains.

By all odds, however, the most important game was the buffalo. This great shaggy ruminant—food, shelter and clothing to the Indian, sacred, revered and ever-beneficial—was bounteously endowed both in number and natural adaptation to almost ideal living conditions.

Ernest Thompson Seton, the naturalist, estimated that buffalo in primitive times numbered 55 million, some 40 million about the time of the Lewis and Clark Expedition and a shrunken 20 million by mid-nineteenth century. (Still no reason to be alarmed, except by a far-seeing few.)

Among these was Captain Nathan Boone. In 1843 he calculated that over one-hundred thousand robes were finding a market annually. Taking into consideration the many additional animals killed for food when the hide was unfit for use as a robe, Boone declared it could be foreseen that the buffalo would cease to exist on the plains.

Sport was one thing; unrestrained slaughter something else. From the time when the first white men arrived there was buffalo shooting for sport.

Noblemen from Europe, sportsmen, frontiersmen, even women rode on the buffalo chase. One of these for example was organized in honor of Grand Duke Alexis of Russia in 1872 in Nebraska. General Sheridan and "Buffalo Bill" Cody were among the hosts.

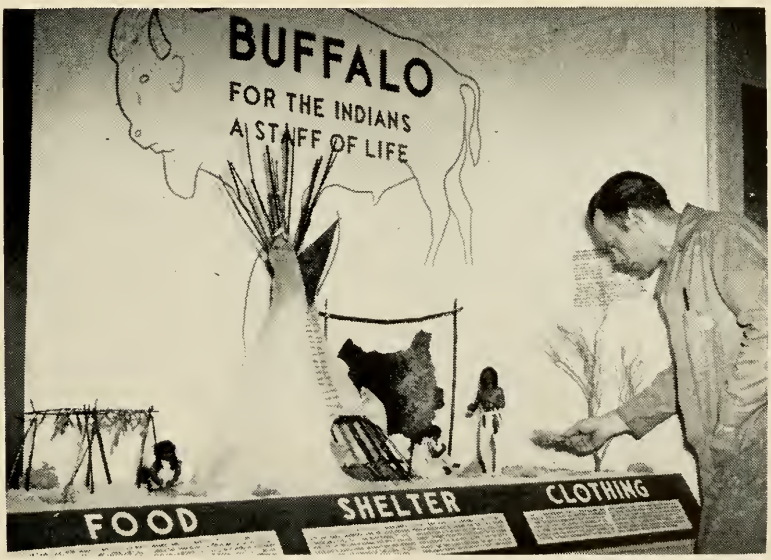
Lured by the trader's whiskey and baubles, even the Indian eventually turned on his friend the buffalo.

By mid-1850, because of the preference of the cow for meat and hides as well as being less hazardous in killing, bulls began to outnumber cows about 10 to 1.

But the great exploiter was the professional buffalo hunter, who killed voraciously, systematically and totally.

With the completion of the Union Pacific Railway the Plains buffalo became divided into two great herds. The northern herd ranged through the Powder River country into Canada. The southern herd frequented the territory between the South Platte and the Arkansas River.

While the Kansas Pacific Railway was being built, Buffalo Bill earned his famous title by fantastic exploits in furnishing construction crews with buffalo meat. As a great



Visitors can easily visualize the Indian's dependence on the buffalo in this miniature display created by Artist Paul Ferryman, standing right.

By the mid-1880's, buffalo had vanished from Montana plains.

despoiler, he slaughtered 4,290 buffalo in 18 months.

When construction on the Santa Fe Railway stopped for a year after it reached Granada, Colorado, all the unemployed men who could get a gun and a wagon or could hire out to a hunter went buffalo hunting. In that area, as among the northern herd a few years later, extermination reached a horrifying high.

On November 7, 1872, the Wichita Eagle stated:

"Thousands upon thousands of hides are being brought in here by hunters. In places whole acres of ground are covered with these hides spread out . . . to dry. It is estimated that there is, south of the Arkansas and west of Wichita, from one to two thousand men shooting buffalo for their hides alone."

According to John C. Ewers, former Curator of the Museum of the Northern Plains Indians at Browning, the northern herd in 1874 was estimated at four million head. Soon the same buffalo-killing fever pervaded Montana territory. Half-breeds from the Red River Valley moved in in large numbers, killing widely and packing the meat and robes home in their grotesque two-wheeled carts. Simultaneously, the merciless hunters, armed with repeating rifles made the final coup, slaughtering the buffalo in horrendous numbers.

By 1879, buffalo had virtually disappeared from the northern hunting grounds of the Blackfeet in Canada. They lingered only a while longer throughout the rest of Montana.

The rate of extermination is reflected in the figures of shipments of robes and hides by I. G. Baker and Company at Fort Benton alone, who shipped 75,000 in 1876, 20,000 the following year, only 5,000 in 1863 and none at all in 1884.

The story was the same throughout all Montana territory. One hundred thousand hides were shipped from the Yellowstone country in 1881. The fever reached a peak the following year when 200,000 were shipped—and it was estimated that as many as 50,000 more animals were wounded, lost and wasted. By the spring of 1883 the buffalo had vanished in Eastern Montana.

In 1884 a party of Piegan hunters found and killed four lone buffalo near the Sweet Grass hills. These were the last wild buffalo killed by this great group of nomadic hunters who had practiced and obeyed the laws of sane conservation.

But others had exploited wantonly. If all of the great food, clothing and housing fabricators in the nation suddenly ceased production, the tragedy and shock to our present civilization would be no greater.

The story of the buffalo is but a brief preface for what is hoped will be conveyed with facilities of the magnificent new state historical building at Helena.

Here, in the first full-fledged State Museum constructed for the benefit of Treasure State residents and their countless guests, will be told visually, dramatically and factually, the significant story of Montana and her people, from pre-historic ages to the present day.

In the retrospect of history, few facets are as compelling and as obvious as the futile ravages of exploitation. Conservation, its sen-

ible opposite, has its definite place in this new exhibit building.

Upon entering the door of the main museum, in the dominant position to the right is the framework which will house a stimulating natural wildlife habitat group. This is part of the NATURAL RESOURCES section with the theme: Nature Sets The Stage For Man's Activity.

In the tranquility of a Montana winter setting there may be seen a buck and doe antelope, a family group of buffalo, the industrious beaver (which for some three decades prior to the 1840s brought the first impact of white civilization into the untamed region.) More tragically even than the destruction of this fur-bearing bonanza and the magnificent buffalo will appear one of the few known specimens of the now extinct Audubon Sheep.

Just beyond, is the only completed section of the museum, titled THE INDIAN FUR TRADER FRONTIER based on the theme: Use of Wildlife Resources.

Here is visualized pre-historic Indian, pre-white man Indian and then the era of the early despoilers. The Indian, who lived so long in harmony with nature, endures the trappers and mountain men, becomes restive and then corrupted under the influence of the white man's whiskey and tinselled trinkets, coming to an abject reservation-period end after his staff of life, the buffalo, had been exterminated. This is the lesson of non-conservation in its most brutal simplicity.

Other major sections of the Museum ultimately will house THE MINERS' FRONTIER: Use of Mineral Resources; THE CATTLEMAN'S FRONTIER: Use of Grass Resources; and THE FARMERS FRONTIER: Use of Soil Resources. The dominant end-section, dealing with the conservation and development of human resources and man-culture, will be titled FOR ALL THE PEOPLE with the theme: Development of Organized Government in Montana.

Another visual lesson in conservation is provided in the Russell Room, where one of the great believers in the old and less-spoiled West portrays it as he liked it. Charles M. Russell had little use for those who tortured the soil and forests, who turned the grass upside down or galled the Indian's compatability with nature.

Along with these other features, there is the State Historical Library and a Rotating Gallery of contemporary art. If anything speaks eloquently for conservation it is the millions of words of raw source material—newspapers, journals and documents—now properly housed in the extensive new library.

All branches of State government have been helpful but high among these has been the Montana Fish and Game Department, which has furnished invaluable technical advice, background data on game animals, life histories and soon will make available most of the mounted specimens for museum exhibit.

The Montana Wildlife Federation, which has indicated interest in sponsoring the dominent wildlife exhibit, has cooperated closely too.

Conservation has found a new ally to assist the State Fish and Game Department, and all other public and private agencies and sportsmen's groups. For this is one of the major rolls of the rejuvenated Historical Society of Montana.

Another of the completed display cases in the Historical Museum features the importance of beaver in the history of Montana.

Montana Sportsmen's Projects

FOURTH IN A SERIES

National recognition focused on two well-known Montanans last year with the selection of Dr. J. W. Severy of Missoula and Thomas Messelt of Great Falls as recipients of an "Award of Merit" (shown above).

Dr. Severy is chairman of the Division of Biological Sciences at Montana State University and Mr. Messelt, a Great Falls businessman, is one of the most active sportsmen in Cascade County.

The award, presented last December by the National Association of Conservation Education and Publicity, was given to these two men for "outstanding contributions to adult conservation education in Montana."

The N A C E P Award came after the Montana Fish and Game Department, a member of the Association, submitted the Adult Education Project of these two men to the national group for consideration. Ordinarily, this award is not made to more than one individual, but because of close association in the program, an exception was made to give a joint honor.

The Montana program which has received attention from conservation workers over the entire nation was conceived and developed in 1949 by Dr. Severy and Mr. Messelt with assistance and suggestions from other ardent sportsmen in the state.

During that year, Ravalli County sportsmen requested Dr. Severy to prepare and deliver a series of lectures at Hamilton, the county seat. Audience reception was so good that Dr. Severy, working with Tom Messelt, revised the original program for

presentation to other interested groups.

This series has since become a part of the educational program of the Montana Wildlife Federation. Under the Federation's sponsorship, it has been presented at Thompson Falls, Helena, Great Falls and Cut Bank, in addition to its origin in Ravalli County. It is scheduled for continuation in several towns this year.

The program is designed to prepare citizens, primarily sportsmen, for an understanding of the complexities of present-day conservation practices and needs. Ten lectures over a five month period forms the basis of the educational effort. These are spaced at two-week intervals and consist of a one-hour discussion with a question and answer period.

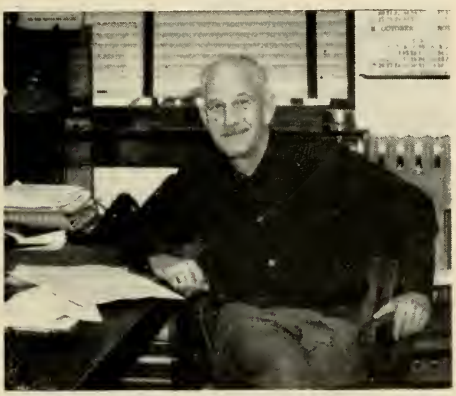
The entire presentation is on an interesting and understandable plane. It is prepared entirely for those who have had no technical training in the fields of zoology, botany or related subjects. Yet it is of keen interest to even experienced technicians because of interpretations placed on the subject matter.

Lectures One, Two and Three deal with fundamentals of soil, water and vegetation. Through these talks the listener becomes prepared for later discussions which show how the needs of man and wildlife are interwoven with the basic problems of soil and water. The next seven discussions deal directly with wildlife research.

Many sportsmen, businessmen, ladies and even teen-agers have attended the wildilfe course and all agree it is a most complete and interesting educational approach to conservation.

Montanans can well be proud of this project of the state's wildlife federation. It has expanded to include a similar program conducted by Drs. C. J. D. Brown and Don Quimby of Montana State College. In addition, special "refresher" courses have been set up to equip state and federal wildlife technicians as well as some sportsmen with material for presentation to interested groups.

The ultimate effect of such education in wildlife management should bring significant results in the future of Montana's hunting and fishing.



For their combined efforts in presenting an outstanding program of conservation education in Montana, Dr. J. W. Severy (left) and Mr. Thomas Messelt (right) each received an Award of Merit shown on the opposite page.

THE SAGE GROUSE SEASON

by

Robert L. Eng, Biologist

Throughout most of the eastern half of the state, and in isolated sage brush studded valleys in the western half, Montana still possesses huntable populations of the largest North American grouse, the sage hen. As with many other native game birds, the original range of the sage grouse has dwindled, but the bird still persists in areas maintaining sizeable blocks of sage brush.

In an effort to obtain more information needed for better management of this species, the Montana Fish and Game Department instituted a study of its prairie grouse in 1952.

Last year, after breeding population inventories and production studies had been completed and recommendations received from deputy game wardens throughout the state, twenty counties were opened for the first legal sage hen hunting in Montana in nine years.

A properly regulated season appears to be one of the more important of the presently known practices employed in managing this bird and such a season can best be determined from facts obtained through intensive year-long studies.

The detection of yearly population trends (yearly increases or decreases) is of prime importance in regulating a season. Attempts are made to measure these trends at different times of the year in an effort to pinpoint any seasonal change and to determine its cause.

As the distribution of this bird in Montana is too great to allow complete coverage with the limited personnel, sample areas are set up on which more intensive studies are made and the information gained is applied to larger areas.

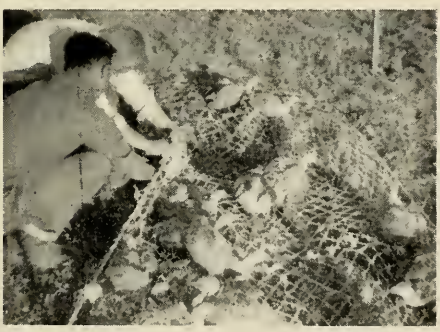
Preparatory to making recommendations regarding a season, population and production figures are gathered by winter aerial strip counts, spring strutting ground counts and spring and early summer road and brood counts.

Winter aerial strip counts, although in the experimental stage, appear to have considerable merit. Briefly, predetermined strips over sage grouse wintering areas are flown and the number of birds flushed are counted, giving the number of birds per mile flown.

During the mating season, which extends approximately from the last of March to the first of June in most of eastern Montana, the male sage grouse congregate daily on strutting grounds in the early morning and late evening. The same grounds are used year after year and the number of males using these grounds each year indicates the population trend.

Starting before the nesting season and continuing through the spring and early summer, trips are made several times weekly over established road routes in sage grouse nesting areas to gather information regarding the hatching peak, the weekly average brood size and the percent of adult hens successfully bringing off a brood.

Determination of the peak of hatch, or the time when the majority of the young are brought off the nest, aids in deciding the most advantageous time to open a season.



A high percentage of the birds trapped in July and August adjacent to nesting areas are hens and young birds.

Birds which are marked and released aid in determining the daily and seasonal movements, longevity of the bird and assist in checking other census techniques.

Brood counts are made from the time the first broods appear until they start intermingling or the young become too large to distinguish from adults. The weekly brood size averages suggest the amount of mortality among young birds and the time this mortality takes place.

Since the percent of a bird population which survives the first year under natural conditions is considered to be quite low, the production figure for any one season is considered to be a very important factor in determining the number of birds to be available during the hunting season.

Game officials are frowned upon if an over-harvest of game occurs. However, it is equally unwise management to under-harvest a game crop. It is hoped that continued study of sage grouse numbers and factors influencing them will provide the information needed to allow Montana sportsmen to participate in annual sound sage grouse seasons.

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White-tailed deer, however, present a proble
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To ascertain numbers of grizzlies in Montan
obtained from tracks which are carefully measure
mum width across the toes. These tracks are mu
variation is noted to avoid repetitious counting.

Exact population figures are not always es
indicating whether or not a particular herd or
own are given careful consideration in establi

BIG GAME
WINTER INVENTORY

operly manage Montana's big game
als, reasonably accurate informa-
n numbers and distribution must be compiled
year. Winter is the ideal time for such a count
eep snows force the animals to concentrate
e they can be more easily counted.

Airplanes are now used in many areas where
the only means of traveling for a game census
with snowshoes. With planes, wide areas may
less possibility of duplication of counts. Elk,
are counted in this way although mountain
y the man on snowshoes.

for both methods. Because this species inhabits
sample strips and figures thus obtained are
population figure.

visual reports are supplemented by information
at maximum length from toe to heel and maxi-
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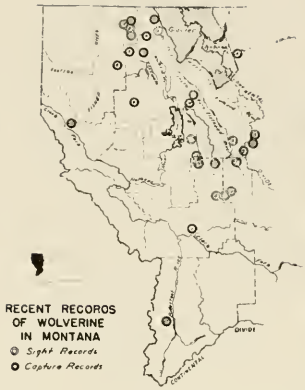


MONTANA'S WILDERNESS WANDERERS

by
Fletcher E. Newby, Fur Biologist

Wolverine has long been considered a vanishing species in the United States and was for many years near extinction in Montana.

Due to the large areas of wilderness country still extant in northwestern Montana, scattered individuals managed to survive the intensive trapping of past years. Restrictions of present day trapping seasons have further served to lessen the pressure from trappers even though the wolverine is classed as a predator in this state and is completely unprotected.

Reports of trappers, fur buyers and woodsmen indicate that the wolverine began to regain its foothold on the wildlife scene in Montana during the 1930s. The distribution and chronology of the records suggests that this increase was not due to natural reproduction alone but was probably assisted by dispersal from populations in Canada and later, Glacier Park.

Few wolverine were recorded in the Park area before its formation in 1910. In 1918, Vernon Bailey, a naturalist, quotes a local resident as believing them to be completely absent. In 1933, tracks were seen for the first time in ten years and since then, tracks and observations of wolverine have been reported almost every year.

Regular reports in the Flathead River drainage outside the Park began in 1939. In 1947, wolverine were seen east of the Continental Divide in the Sun River area, and reports have continued to the present. Last year marked the first recent reports from the Cabinet and Bitterroot Ranges.

Since 1944 twenty visual observations of wolverine have been made

by forest travelers and workers in the mountainous areas of northwestern Montana. In addition, fourteen have been shot or trapped since 1940.

The wolverine little resembles any other animal the forest traveler is likely to encounter. Most striking of its features are the broad yellowish bands extending along the sides and meeting at the base of the tail. There is considerable variation in the color of this lateral band but the dark brown color, bearlike form and rather short, bushy tail further identify the animal as a wolverine.

Largest of the weasel family, weights of Montana wolverine have varied between 18 and 36 pounds for a female and a male, respectively.

The feet of the wolverine are surprisingly large for the size of the animal. Tracks of the front feet may measure as much as 5 inches wide by six and one-half inches long.

As can be seen in the illustration, the hind feet lack the extra rear pad of the front and leave a smaller imprint. A clear imprint of a wolverine track will show five toes whereas cats and wolves have only four.

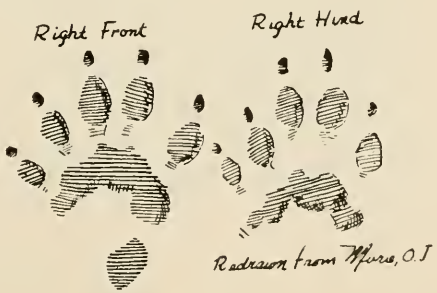
The breeding habits are very poorly known. Accurate information on the gestation period is lacking but it is known that two to five young are born in April or May. Four half-grown young were seen by forest rangers on the Stillwater River in Lincoln County during August of last year.

Small animals make up the bulk of the wolverine diet but they are probably one of the least particular animals where food is concerned and may make use of almost any edible item.

Because of its present rarity and striking appearance, wolverine taken by hunters and trappers today are usually prepared as rugs or whole mounts and highly regarded as trophies.

An indication of its value as a fur animal is the $20.00 received by a Montana trapper for a pelt sold in 1952. Most important of all, however, is the fact that an interesting member of Montana's original wildlife has not been lost to this and future generations.

[Literature Cited: Bailey, Vernon, 1918. **Wild Animals of Glacier National Park (The mammals).** Government Printing Office, Washington, D. C.]



Wolverine tracks are easily identified by their largeness and by the definite impression of five toes for each foot. One of the more common of the wolverine gaits is the three-track lope pattern shown at left.

By FAYE COUEY, Big Game Biologist

"The Rocky Mountain bighorn sheep is going out of the wildlife picture just like the heath hen and the passenger pigeon."

That would seem to be the consensus of several writers and biologists in recent years.

This gloomy outlook for the survival of one of the sportiest big game animals known today, has led to feverish research by western states where bighorns are found, in order to find out what was the cause for the decline and what can be done about it.

Much good information was and is yet being gained from these studies relative to proper game management but no one has yet come up with a specific reason for the bighorn's population decrease nor a remedy.

In Montana, the bighorns dwindled from once numerous populations down to a dozen or more remnant bands that have persisted in spite of disease, predation, poaching, livestock competition and being forced to live on unnatural range because of human activities.

However, statistics indicate that if the bighorn continues at his present thrifty rate, he will approach his former importance as a big game animal in this state.

Today, there are about 1,600 bighorns located in 15 areas in the state.

The largest group is the Sun River herd which numbers about 350 animals. The Ural-Tweed herd in the Kootenai, the Glacier Park, Yellowstone Park and Stillwater herds number between 100 and 200 each. Several other smaller groups are found in the drainages of the Rosebud, Gallatin and Madison Rivers, in the Tobacco Root Mountains, Rock Creek in Granite County, Flint Creek Range west of Deer Lodge, the Mission Range, Moiese Bison Range and the West Fork of the Bitterroot River.

The last bighorn in the lower Thompson River herd disappeared five years ago. Besides these native herds, Montana also has two transplanted groups, one on Wildhorse Island on Flathead Lake and another in the Missouri River Breaks in northern Garfield County.

More study has been spent on the Sun River herd of bighorn than on any other state herd, mainly because of its size and accessibility. During the past ten years the population has fluctuated for some unexplainable reason. One year the lamb crop would be good, another it would be poor and no direct cause could be traced or attributed to this. The possibility of disease, parasitism, predation and range competition all presented possibilities.

During the past two years the numbers in the herd have increased very favorably. Just recently, 290 sheep were counted, 25 percent of which were lambs. There was one lamb for every 1.52 ewes and this latter group included the long yearlings. This is the highest count and the largest number of lambs counted during the past 11 years in Montana.

One factor which may play an important part in the bighorn improvement in the Sun River herd has been the relief from elk competition on the winter range. Since the Montana Fish and Game Department acquired the Elk Winter Range outside the mountains, between two and three thousand elk winter there.

Prior to this acquisition, these elk were forced to winter inside the mountains and they competed heavily with the bighorns. This winter range for elk has been in operation for three years and the inside range has shown definite improvement.

Missouri River Breaks Plant

One of the recommendations from earlier bighorn studies was to transplant some of these mountain sheep to new but historical range (range known to have been inhabited by a particular species but where the animal no longer exists.)

Because the bighorn was found from the roughest mountains in the

Some protection and defense is afforded mountain sheep by their gregarious nature. Above, a group of ewes browse on typical sheep range of a Sun River plateau area.

western part of the state to the badlands in the eastern part of Montana, the Department has had a large number of sites from which to select transplanting areas.

Transplanting has been done with varying success. First attempts resulted in dispersal and failure to become established. This may have been because the initial plant was too small and the fact that the group was not held together as a unit until they adjusted to the new range.

A release pasture where animals would be forced to stay in one area, have lambs, and get acclimated, seemed to be the solution.

Such a pasture was constructed in the Breaks of the Missouri River in the Fort Peck Game Range. (This is the locality where in 1915 the last Audubon bighorn sheep was killed thereby making that famous subspecies extinct.)

The pasture was stocked in 1947 with 16 bighorns obtained from the thrifty Tarryall herd in Colorado. Predators in the fenced area were eliminated as much as possible. These bighorns were kept in this closure for three years after which part of them were released.

Then in 1952, the remaining sheep were turned loose. Most of them remained in the immediate vicinity. It is estimated that 75 head are now in this herd and it is considered a very successful plant.

Wildhorse Island Herd

Another plant was made on Wildhorse Island on Flathead Lake. Several mountain sheep were moved from the Sun River herd in 1948 to augment a small group that had been introduced on the Island several years previously by a former private owner. This herd now numbers about 60 animals.

The Wildhorse Island herd has been the object of an intensive study during the current year by a graduate fellow of the Cooperative Wildlife Research Unit from Missoula. He is working very closely with these sheep and has obtained much valuable data regarding herd increase, feeding habits, disease, parasites, trapping techniques, mineral attraction, etc., all of which help in managing this species.

Predation, while possibly not a major factor in regulating herd increase, definitely has an effect on herd numbers. In the Sun River, a concerted effort is being made to limit numbers of predators such as coyotes, wolves, bobcats and mountain lions in the bighorn winter range. With a peak population of bighorns present, Department fieldmen should be able to determine to some degree the effect that predator control has in an area where the predation load is normally heavy.

No, the bighorn is not doomed—if game managers will follow up with the application of a few of the management principles they have learned. Two of these principles are working now. They are removal of competing animals from critical winter range and establishing new herds on suitable range.

New Beaver Law Provides For Open Season

By ROBERT H. LAMBETH, State Game Warden

For the first time since 1917, an open season on beaver may be declared this year in carefully designated areas of public lands where these animals have increased to such an extent that a reduction in numbers becomes advisable for good management of the species.

Heretofore, beaver could be trapped only on private lands where sufficient evidence of their damage to crops and acreage could be shown. Under provisions of a bill introduced during the 33rd session of the state legislature and signed by Governor J. Hugo Aronson, the Montana Fish and Game Commission now has ". . . authority to declare an open season on beaver under such rules and regulations as it shall prescribe; provided, however, that nothing herein contained shall authorize trapping on privately owned or leased lands, except with the approval of the land-owner or lessee. . ."

Beaver have played one of the most important roles in Montana's history and until about 1840 were the chief reason for white exploration of the Northwest Territory. Once beaver were said to be more plentiful than the buffalo but trappers and traders drained the supply until this species was considered one of the nation's depleted heritages by the turn of the twentieth century.

However, man reckoned without the natural tenacity of the beaver. From what it known about their life habits it is believed that they live about 15 years, producing ten to twelve litters of four to six kits each. Their natural enemies are few because of their nocturnal and aquatic habits. By protecting them from trappers by a law passed in 1917, beaver have made a dramatic come-back.

Early records of the Montana Fish and Game Department show that relatively few permits were issued during the first years after the Montana legislature authorized the Department to charge a $10.00 fee for a trapper's license.

Although this first law was rather weak, it was effective enough to allow natural reproduction to stabilize the beaver population. In succeeding years, stronger laws were enacted and more accurate records told of beaver increase.

From 1923 through the 1930s, Montana annually shipped an average of more than 5,000 beaver skins out of the state. This figure jumped to more than 10,000 pelts per year since 1940 with a peak of 17,717 in 1941. The figures may not be startling if compared with the hundreds of thousands of skins shipped annually at the peak of the beaver trade of the 1800s, but it represents a substantial gain when their depleted populations are considered.

In the past decade, beaver have become not only a nuisance but a problem. Their industrious activities have longe harrassed the farmer and rancher and are gradually spreading out along streams and rivers where their dams hinder fish migration during spawning season.

With the newly authorized power to establish open seasons on beaver, the Montana Fish and Game Commission will now be able to regulate more closely the management of this important fur-bearer. Montana trappers will be able to reap a harvest of the surplus animals thus putting to economic use a resource that in recent years has been wasted. Disease, such as tuleremia which often destroys entire colonies, will be lessened as a result of controlling numbers. Damage to meadows, roads and bridges can be controlled and the vegetative food supply will be saved from over-use.

RAY RETIRES . . .

High on the list of interesting occupations in Montana is the career of Ray Wells who for the past 22 years has successfully raised hundreds of thousands of game birds for Montana sportsmen at state operated game farms. On December 20, 1952, Mr. Wells retired, turning over his duties as Supervisor of Game Farms to his successor, R. J. Green, previously foreman of the Warm Springs Game Farm.

Mr. Wells came to Montana from Pendleton, Oregon, in 1929 to begin the first of his 22 years of service with the Montana Fish and Game Department.

In the spring of 1930, 4,000 pheasant eggs were purchased from Washington and hatched with the help of obliging Rhode Island Reds. From this beginning, a brood stock of pheasants was started and the first birds from Warm Springs were released that summer. Mr. Wells was transferred to Billings in 1936 to construct and operate a game farm. He remained there continuously as foreman with the exception of 22 months in 1943-44 when activities of all game farms were temporarily halted because of World War II.

Broods of wild game birds were started again in 1945 and the first crop for the Billings area was released in 1946. In 1949, Mr. Wells was named Superintendent of all game farms in Montana. Well over 150,000 pheasants have been released in the Billings area alone under his supervision plus Chukar partridges and valley quail.

Not only has Mr. Wells had an interesting occupation but in his retirement he carries on an intresting hobby—raising chinchillas which he began breeding more than seven years ago. He also shares with many Montana sportsmen a keen interest in fishing and hunting, especially big game, and expects to return to Montana periodically from his Medford, Oregon home for these sports.

Relaxing at Helena's Montana Club after a testimonial dinner for Ray Wells who retired as Game Farm Superintendent on December 20 are Montana Fish and Game Commission Chairman Edward M. Boyes (left), Mr. Wells (center), State Game Warden R. H. Lambeth (right).

Game warden aspirants who took a written examination at Helena are pictured above. More than 70 other applicants were tested at eight other major Montana cities in December.

GAME WARDEN EXAMINATIONS

Evidence of the interest in conservation practices in Montana has been clearly demonstrated in the number of individuals who apply for game warden positions with the Fish and Game Department each time such employment is offered.

With the last announcement of openings in this field early in December of 1952, a record 80 applicants appeared for the written test which was given in Helena, Billings, Butte, Bozeman, Kalispell, Miles City, Glasgow, Great Falls and Missoula.

From these 80 candidates a roster of 36 eligibles was compiled. These 36 eligibles were further screened last month in an interview with Department executives.

Those successfully establishing their suitability for this type of work will attend a "pre-employment training school" for a basic training period of ten days.

Applicants chosen to fill present vacancies are required to serve an apprenticeship with a veteran warden and a probationary period of one year before they are classified as "Permanent Special Deputy Game Wardens."

Future replacements in the warden force will be selected from remaining names on the eligibility roster.

Montana game wardens enter the law enforcement division at a minimum salary of $2,640 per year. To be considered, applicants must be male, between the ages of 21 and 40, U. S. citizens, residents of Montana for one year prior to application and possess a high school education. They must also be able to pass a physical examination, be free from disabling disease or defect, have 20/20 vision or corrected to 20/20 and have normal hearing.

FLYWAYS: BIRD HIGHWAYS

by
Wynn Freeman, Waterfowl Biologist

Presumably, the general reluctance of most people to accept new ideas is part of human nature. The radio and automobile were both considered fads at one time. Even today, there are those who do not believe in the germ theory of disease.

While flyway management of waterfowl is not directly comparable to the above illustrations, still it is a new idea and as such meets with some skepticism by a part of the hunting public.

The basic idea of managing waterfowl by flyways is sound. Extensive banding studies plus the observations of bird behavior have proved that the birds will follow certain prescribed passageways to get from the northern breeding grounds to the southern wintering grounds.

With knowledge of certain trends in waterfowl migration, flyways have been defined for the better management of ducks and geese. Certain physiographic features, such as mountain ranges and river systems, form the natural boundaries of flyways. However, for administrative purposes, state borders which closely adhere to the natural limits of the flyway, are being used.

There is, naturally, some overlap in these waterfowl highways. This is especially true between the Central and Mississippi regions because of the lack of a mountain range or other physical boundary between the areas.

These overlaps are certainly of minor importance and do not cause any noticable increase or decrease in the number of ducks in any one flyway.

The birds of the Central flyway, of which Montana is a part, come from Canada and funnel down through Montana and the Dakotas to end up for the winter along the Texas and eastern Mexican coasts. Birds from other flyways have similar summer-to-winter flight patterns.

Bird populations in the various flyways are subject to some variation. Not all of the flyways have the same number of birds. Climatic variations can cause considerable differences in total populations. This is especially true of drought in the prairie flyways, where the birds are dependent upon potholes for their breeding habitat.

Variations in the number of birds between flyways make regulation difficult. Not difficult from a view point of sound management, but from a standpoint of developing a satisfied hunter population.

It would be an easy matter to regulate each species by flyways if the same regulations could apply over the whole country. But why should the season be limited in one flyway which has plenty of birds just because another flyway 3,000 miles away has a reduced supply?

Each flyway is therefore governed by regulations based on available

supply and number of hunters expected to take birds during the season.

Whether or not such limiting methods are accepted and considered sound by some hunters seems to depend upon which flyway takes a cut or receives the increase during the season.

In order to promote sound flyway regulations and management, the various states have banded together to form flyway councils. These councils meet periodically to discuss what can be done to improve the overall situation of waterfowl within flyways.

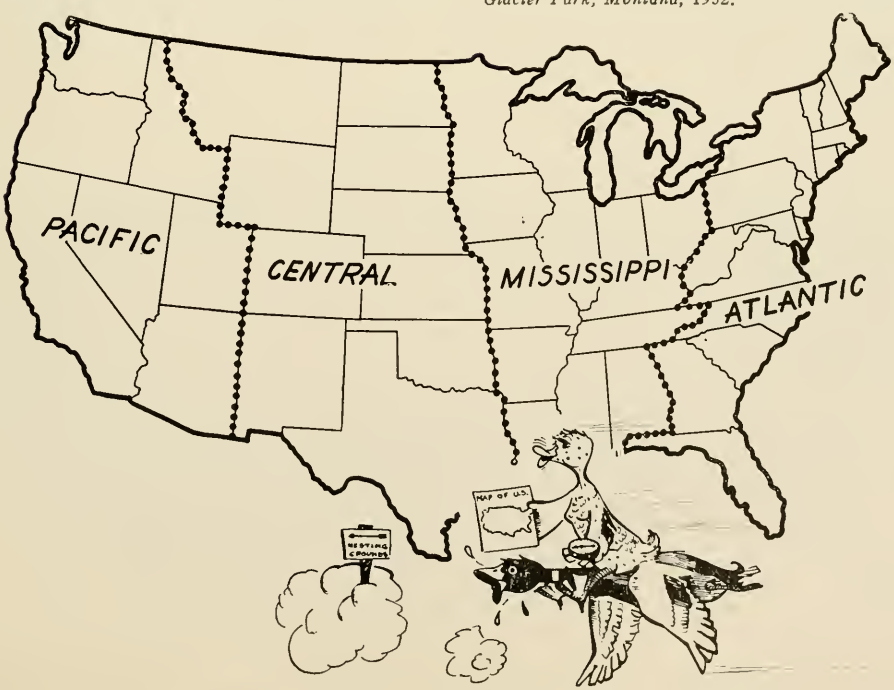
Each group of states works side by side with the federal government not only to work for better waterfowl hunting, but also to improve the status of waterfowl on a continuing year-after-year basis.

Unfortunately, the average sportsman visualizes the regulations for the season as the only cog in the complex machinery of waterfowl management. A quote by Mr. Albert Day will clearly illustrate the proper place of regulaitons and point up the other factors of the waterfowl picture in their proper perspective:

"Regulations are temporary. They adjust the take to the supply year by year and should be considered on that basis alone. Seasons and bag limits may be liberal in times of plenty and restrictive in times of scarcity. So, while they do have the greatest appeal to the individual duck hunter, from our point of view they are merely one of the tools of management.

"The important thing that we must never forget is that this sport of wildfowling is dependent upon the continuing availability of suitable nesting grounds, of resting and feeding areas along the migration routes and of adequate wintering facilities."

Day, Albert M., Director of U. S. Fish and Wildlife Service, Washington, D. C., from a paper presented at the Western Association of Game and Fish Commissioners 32nd annual meeting, Glacier Park, Montana, 1952.



MONTANA'S WINTER SPORT FISH

by

Vernon Craig

LING *(Lota lota maculosa),* Lawyer and American Burbot are some of the more common names given this freshwater representative of the codfish family.

Slender, slippery, greenish and darkly mottled on the sides and back, the ling may be further distinguished by its rounded tail fin, long dorsal and anal fins and by the presence of a short barbel near each nostril and a somewhat longer one near the chin-point.

WHITEFISH *(Prosopium williamsoni),* often called Mountain Herring, are becoming increasingly important as a winter fishery in Montana.

This species is generally silvery in color, becoming somewhat bluish on the back and whiter on the ventral area. The absence of any spots or modeling is conspicuous in the adults.

The heads of whitefish are rather short and conical, the mouth is noticeably small with the lower jaw falling quite short of the end of the snout.

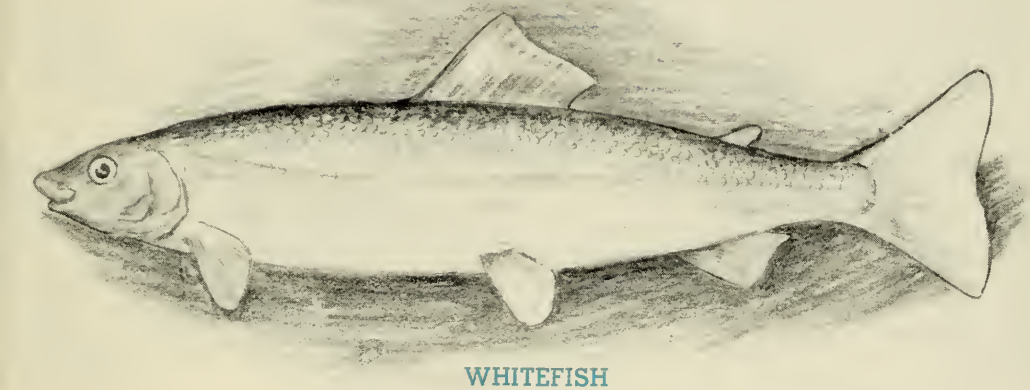
In lakes, whitefish eat a great deal of plankton (tiny, floating or weakly swimming organisms in the water) whereas those living in streams and rivers subsist largely upon the larvae and nymphs of aquatic organisms. Strangely, whitefish seem to do their heaviest feeding during the winter periods.

KOKANEE *(Oncorhynchus nerka),* Sockeye, Little Redfish, Silver Trout or Walla are a few of the names given to this dwarfed member of the Salmon family. Its nearest relative is the Blueback or Sockeye Salmon.

During most of its life, the Kokanee is rather silvery blue in coloration and is dark spotted on the back and tail; however, as they prepare to spawn, their color becomes more reddish, especially on the sides, and the bodies of the males become distorted, the jaws hooked. Thriugh their spawning activities, the fins of the Kokanee often become worn and frayed and their bodies become marred and scuffed.

Their food is largely plankton which is secured when water is strained through specialized gill rakers.

LING



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